

SCENARIO #2 - balanced restrictions and relaxation of exports.

Scenario Features - Actively Manage Flex Operations under the following criteria:

1. balance relaxation and restriction effects of flex operations on exports between env and water supply;
2. provide restrictions on exports for added protection beyond Accord, AFRP, and Common Program to delta smelt, spring run chinook smolts (fall), fall run San Joaquin smolts (spring), delta smelt adults (winter), and delta smelt young (spring) from entrainment/salvage losses.
3. Make up water exports foregone from added export restrictions from combination of moderate relaxation of export restrictions and limited relaxation of outflow/X2 restrictions when monitoring and salvage indicate no substantial risk to any key fish.
4. Any water made up in excess of foregone exports would be placed in an environmental account for later use as seen fit to provide additional protection or benefits to fish.
5. New water supply developed from new facilities would be shared to provide additional env and water supply benefits above the baseline of the ACCORD.

Tradeoffs:

1. High salvage risk as indicated by hydrological conditions (inflow and change in inflow), monitoring, and salvage, are potentially reduced by reducing exports.
2. Lost export capacity is regained through relaxation of export and X2 constraints when fish are not at risk to export pumps as indicated by monitoring, hydrological conditions, and salvage.
3. High salvage risk to steelhead, splittail, and striped bass would be reduced at least in part from protections to delta smelt and salmon; otherwise new fish screen facilities should provide adequate protection to these species.
4. Any net export losses would be made up with newly developed storage or other facilities that provide a net water supply benefit.
5. Any significant salvage losses that are not alleviated by the added protection would be made up by new env water made available from newly developed storage or other facilities that provide a net water supply benefit.

Months	Present Standards	Target	Target Year Type	flex ops triggers (in order of application)	E/I & Export Restrictions	QWEST	X2	VAMP	DCC& Hood	HOR	Habitat
Jan-Mar		<u>Restrictions</u> for delta smelt adults, steelhead smolts, and salmon fry (all show at export facilities in most winters under high exports (8-15kcfs). Salvage events are often associated with declining outflow and QWEST as system operations come under control). Largest salmon fry events occur under very high outflows that transport many salmon fry into the central and south Delta. Salmon smolts may occur at any time during the period.	All year types.	1. presence of significant portion of delta smelt population in central and south Delta. 2. Under rapidly falling inflows and QWEST or QWEST below 1000cfs. 3. presence of delta smelt in salvage above 100 individuals per day (per facility) 4. Presence of salmon fry in salvage above 1000 individuals per day (per facility) 5. Presence of salmon smolts in salvage above 100 individuals per day (per facility)	If 1, then limit exports to <10,000 cfs  If 2, then limit exports <8,000 cfs.  If 3 or 4 or 5, then limit exports <6,000 cfs. If either 3, 4, or 5 persist reduce export to 1500 cfs for up to 10 days.	If 1, then maintain at -1,000 or higher - limit drop to 1,000 cfs per week  If 1 and 2, then limit to >500cfs  If 3 or 4 or 5, then limit to >1,000 cfs	If 1 and 3, then maintain X2 at least as far downstream as Collinsville.	NA	DCC closed, otherwise both are pen as needed to satisfy QWEST requirements	If 2, then keep open, unless large numbers of San Joaquin salmon fry are indicated from Monitoring at Mossdale	If 1, 2, and 3, then flood additional habitat

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		<u>Relaxations</u> on exports for the purpose of improving water supply	All year types.	1. delta inflows exceed 50K cfs 2. Delta inflows are steady or rising and exceed 20,000 cfs. 3. 5 day running averages of smelt and steelhead salvage are below 10 and salmon salvage is below 100 individuals per day and monitoring indicates a significant portion of the delta smelt population is not in the Central or South Delta.	No export constraints under 1 or 2 or 3, except above restrictions apply.	Nothing to relax.	If 1 or 2, and 3, then no constraints.	NA	--	--	--
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Months	Present Standards	Target	Target Year Type	flex ops triggers (in order of application)	E/I & Export Restrictions	QWEST	X2	VAMP	DCC& Hood	HOR	Habitat
Apr-Jun		<u>Restrictions</u> for delta smelt young and salmon smolts, (they show at export facilities in most springs under a wide range of exports. Salvage events are often associated with declining outflow and QWEST as system operations come under control)	All year types.	1. presence of significant portion of delta smelt population in central and south Delta (winter adults or spring young). 2. Under rapidly falling inflow and QWEST or QWEST below 1000cfs. 3. presence of delta smelt in salvage above 500 individuals per day (per facility) 4. Salmon smolt salvage exceeds 1000 per day per facility.	If 1, then limit exports to <10,000 cfs  If 2, then limit exports <8,000 cfs.  If 3 or 4, then limit exports <6,000 cfs.	If 1, then maintain at -1,000 or higher; and limit change to 1,000 cfs per week  If 1 and 2, then limit to >500cfs  If 3, then limit to >1,000 cfs	If 1 and 3, then maintain X2 at least as far downstream as Collinsville.	If 1, 2, and 3, then extend 20 days.	Open as needed to satisfy QWEST requirements	If 1 and 2, then keep open	If 1, 2, and 3, then flood additional habitat
		<u>Relaxations</u> on exports for the purpose of improving water supply	All year types.	1. delta inflows exceed 50K cfs 2. Delta inflows are steady or rising and exceed 20,000 cfs. 3. 5 day running average of smelt salvage is below 100 individuals per day and salmon salvage is below 1000 per day, and monitoring indicates a significant portion of the delta smelt population is not in the Central or South Delta.	No export constraints under 1 or 2, except above restrictions apply.  If 3, then only above restrictions apply.	Nothing to relax.	If 1, or 2, and 3, then no constraints.	No relaxation of experiment	--	--	--

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Months	Present Standards	Target	Target Year Type	flex ops triggers (in order of application)	E/I & Export Restrictions	QWEST	X2	VAMP	DCC& Hood	HOR	Habitat
Jul-Sep		<b><u>Restrictions</u></b> for delta smelt young and salmon smolts, (they show at export facilities in most summers under a wide range of exports. Salvage events are often associated with declining outflow and QWEST as system operations come under control)	All year types.	1. presence of significant portion of delta smelt population in central and south Delta (winter adults or spring young). 2. Under rapidly falling inflow and QWEST or QWEST below 1000cfs. 3. presence of delta smelt in salvage above 500 individuals per day (at either facility) 4. Salmon smolt salvage exceeds 1000 per day at either facility.	If 1 or 2, then limit exports <8,000 cfs.  If 3 or 4, then limit exports <6,000 cfs.	If 1, then maintain at -1,000 or higher; and limit change to 1,000 cfs per week  If 1 and 2, then limit to >500cfs  If 3, then limit to >1,000 cfs	If 1 and 3, then maintain X2 at least as far downstream as Collinsville.	NA	Open as needed to satisfy QWEST requirements	If 1 and 2, then keep open	If 1, 2, and 3, then flood additional habitat
		<b><u>Relaxations</u></b> on exports for the purpose of improving water supply	All year types.	1. delta inflows exceed 50K cfs 2. Delta inflows are steady or rising and exceed 20,000 cfs. 3. 5 day running average of smelt salvage is below 100 individuals per day and salmon salvage is below 1000 per day, and monitoring indicates a significant portion of the delta smelt population is not in the Central or South Delta.	No export constraints under 1 or 2, except above restrictions apply.  If 3, then only above restrictions apply.	Nothing to relax.	If 1, or 2, and 3, then no constraints.	No relaxation of experiment	--	--	--

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Months	Present Standards	Target	Target Year Type	flex ops triggers (in order of application)	E/I & Export Restrictions	QWEST	X2	VAMP	DCC& Hood	HOR	Habitat
Oct-Dec		<b><u>Restrictions</u></b> for fall migrant salmon smolts or juveniles, both of which occur sporadically in large numbers in the historical record. Salvage events are often associated with declining or low outflow and QWEST. Note: constraint for latter half of Dec is same as Jan-Mar, as salmon fry may be abundant.	All year types.	1. Under rapidly falling inflow and QWEST or QWEST below 1000cfs. 2. presence of delta smelt in salvage above 500 individuals per day (at either facility) 3. Salmon smolt salvage exceeds 1000 per day at either facility.	If 1, then limit exports to <6,000 cfs.  If 2 or 3, then limit exports <4,000 cfs.	None	No change.	NA	--	--	--
		<b><u>Relaxations</u></b> on exports for the purpose of improving water supply	All year types.	1. Delta inflows are steady or rising and exceed 20,000 cfs. 2. 5 day running average of smelt salvage is below 10 individuals per day and monitoring indicates a significant portion of the population is not in the Central or South Delta.	If 1 and 2, then no export constraints.	Nothing to relax	If 1 and 2, then no constraints.	NA	--	--	--